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```

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```

Figure 1A

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agaaagagaa	ataacagcag	gttgggcaat	ggagtgtgt	atgcttctgt	gaaccccgag
tatttcagcg	cagctgatgt	gtacgtgcct	gatgaatggg	aggtagctcg	agagaagatc
accatgaacc	gggagctcgg	acaaggggtcc	tttgggatgg	tctatgaagg	agtggccaag
ggtgtggtca	aggatgaacc	cgaaccaga	gtggccatca	agacggtaaa	cgaggctgca
agtatgcgtg	aaagaatcga	gtttctcaac	gaggcctcgg	tgatgaagga	gttcaattgt
caccatgtgg	tccggttgct	gggtgtggta	tcccaaggcc	agcccacct	ggtcatcatg
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cagaataatc	tagtcctcat	tccctccgagc	ttaagcaaga	tgatccagat	ggctggagag
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ccttaatgac	aacaactta	agcaacagga	cactcgagaa	ttgagtctct	tcgttctctg
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Figure 1B

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mksqsgggsp	tslwglvfls	aalslwptsg	eicgpgidir	ndyqqlkrle	nctviegflh
illiskaedy	rsyrfpkltv	iteylllfrv	agleslgdlf	pnltvirgwk	lfynyalvif
emtnlkdigl	ynlrnitrge	irieknadlc	ylstidwsli	ldavsnniyiv	gnkppkecgd
lcpgtleekp	mcekttinne	ynyrcwttnr	cqkmcpvscg	kractennec	chpeclgsch
tpddnttcva	crhyyykgvc	vpacppgtyr	fegwrcvdrd	fcanipnaes	sdsdgvfihd
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fyvldnqnlq	qlwdwnhrnl	tvrsqkmyfa	fnpklcvsai	yrmeevtgk	grqskgdint
rnngerasce	sdvlftrstt	twknriiitw	hryrppdyrd	lisftvyyke	apfknteyd
gqdacgsnsw	nmvdvdlppn	kegepgillh	glkpwtqyav	yvkavtltmv	endhirgaks
eilyirtnas	vpsipldvls	asnsssqliv	kwnpptlpng	nlsyyivrwq	rqpqdgylr
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kvfenflhns	ifvprperrr	rdvmqvantt	mssrsrnttv	adtyntdpe	efeteypfpe
srvdnkertv	isnlrpftly	ridihscnhe	aeklgcsasn	fvfartmpae	gaddipgpvt
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nytariqats	lsgngswtdp	vffypvaktt	yenfmhliia	lpvaillivg	glvimlyvfh
rkrnnsrlgn	gvlyasvnpe	yfsaadvyvp	dewevareki	tmnrelgqgs	fgmvyegvak
gvvkdepetr	vaiktvneaa	smreriefln	easvmkefnc	hhvvrllgvv	sggqptlvim
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rncmvaedft	vkigdfgmtr	diyetdyyrk	ggkgllpvrw	msheslkdg	ftthsdvwsf
gvvlweiatl	aeqpyqglsn	eqvlrfvmeg	glldkpdncp	dmlfelmrnc	wqynpkmrps
fleiigsikd	emepsfqevs	fyyscenkpp	epeelemele	mepenmesvp	ldpsassasl
plperhsgkh	aengpgpgvl	vlrasfderq	pyahmnggra	neralplpqs	stc

Figure 2

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Figure 3A

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atgctgcgct tgcctaaaa ctgaagctga gaagcaggct gagaaggagg aggctgagta
ccgtaaagtc tttgagaatt tccttcacaa ttccatcttt gtgcccaggc ccgaaaggag
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ggtagctgac acctacaata tcacagagcc ggaggagtcc gagacagagt accctttctt
tgagagcaga gtggataaca aggagaggac gtgcatctcc aacctccggc ctttcactct
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Figure 3B

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ID 1: 3727      ct0g ttt gaa ctt atg cgc atg tgc tgg cag tat aac ccc aag atg cgg ccc tcc ttc ctg 3786
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ID 3: 4211      ct0g ttt gaa ctt atg cgc atg tgc tgg cag tat aac ccc aag atg cgg ccc tcc ttc ctg 4270
aa : 1243      l   f   e   l   m   r   m   c   w   q   y   n   p   k   m   r   p   s   f   l   1262

ID 1: 3787      gag atc atc ggc agc atc aag gat gag atg gag ccc agc ttc cag gag gtc tcc ttc tac 3846
                ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
ID 3: 4271      gag atc atc ggc agc atc aag gat gag atg gag ccc agc ttc cag gag gtc tcc ttc tac 4330
aa : 1263      e   i   i   g   s   i   k   d   e   m   e   p   s   f   q   e   v   s   f   y   1282

ID 1: 3847      tac agc gag gag aac aag eet ccc gag cca gag gag ctg gag atg gag ctg gag atg gag 3906
                ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
ID 3: 4331      tac agc gag gag aac aag cct ccc gag cca gag gag ctg gag atg gag c-- --- --- --- 4379
aa : 1283      y   s   e   e   n   k   p   p   e   p   e   e   l   e   m   e   l   e   m   e   1302

ID 1: 3907      gct gag aac atg gag agc gtc cca ctg gac cct tcg gcc tcc tca gcc tcc ctg cct ctg 3966
                ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
ID 3: 4380      -ct gag aac atg gag agc gtc cca ctg gac cct tcg gcc tcc tca gcc tcc ctg cct ctg 4438
aa : 1303      p   e   n   m   e   s   v   p   l   d   p   s   a   s   s   a   s   l   p   l   1322

ID 1: 3967      cct gaa aga cac tca gga cac aag gct gag aat ggc ccg ggc cct ggc gtg ctc gtt ctc 4026
                ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
ID 3: 4399      cct gaa aga cac tca gga cac aag gct gag aat ggc ccg ggc cct ggc gtg ctc gtt ctc 4498
aa : 1323      p   e   r   h   s   g   h   k   a   e   n   g   p   g   p   g   v   l   v   l   1342

ID 1: 4027      cgc gcc agt ttt gat gag aga cag cct tac gct cac atg aac ggg gga cgc gcc aac gag 4086
                ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
ID 3: 4499      cgc gcc agt ttt gat gag aga cag cct tac gct cac atg aac ggg gga cgc gcc aac gag 4558
aa : 1343      r   a   s   f   d   e   r   q   p   y   a   h   m   n   g   g   r   a   n   e   1362

ID 1: 4087      agg gcc ttg cct ctg ccc cag tcc tcg acc tgc tga 4122
                ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
ID 3: 4559      agg gcc ttg cct ctg ccc cag tcc tcg acc tgc tga 4594
aa : 1363      r   a   l   p   l   p   q   s   s   t   c   *   1373

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Figure 4

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ID 5: 1      agagtggccatcaagacggtaaacgaggctgcaagtatgcgtgaaagaatcgagtttctc 60
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ID 6: 56632  agagtggccatcaagacggtaaacgaggctgcaagtatgcgtgaaagaatcgagtttctc 56573

ID 5: 61      aacgaggcctcggtgatgaaggagttcaattgtcaccatgtg0gtaagaagccaagatgag 120
            |||||||
ID 6: 56572  aacgaggcctcggtgatgaaggagttcaattgtcaccatgtg0gtaagaagccaagatgag 56513

ID 5: 121     acatggacagaaagtatggacagaaaggaccaccctgtatgtccttggccagctacggaa 180
            |||||||
ID 6: 56512  acatggacagaaagtatggacagaaaggaccaccctgtatgtccttggccagctac-gaa 56454

ID 5: 181     ttgttgcccttgccctcttcccagtgggtagtttccccggttgcaattcttgccacccacaga 240
            |||||||
ID 6: 56453  ttgttgcccttgccctcttcccagtgggtagtttccccggttgcaattcttgccacccacaga 56394

ID 5: 241     cccttgagggtgggagcctcgccctcgccctcccaccagaactctgctcctggctacagggc 300
            |||||||
ID 6: 56393  cccttgagggtgggagcctcgccctcgccctcccaccagaactctgctcctggctacagggc 56334

ID 5: 301     cccagcaccacccagttccgagaggcgtaggtcatcatgtgggatgccccctccccctc 360
            |||||||
ID 6: 56333  cccagcaccacccagttccgagaggcgtaggtcatcatgtgggatgccccctccccctc 56274

ID 5: 361     tgagtccttttcttgattcctccag0gtccggttgctgggtgtggtatcccaaggccagcc 420
            |||||||
ID 6: 56273  tgagtccttttcttgattcctccag0gtccggttgctgggtgtggtatcccaaggccagcc 56214

ID 5: 421     caccctgggtcatcatggaactaatgacacgcggtgatctcaaaagttatctccggtctct 480
            |||||||
ID 6: 56213  caccctgggtcatcatggaactaatgacacgcggtgatctcaaaagttatctccggtctct 56154

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            |||||
ID 6: 56153  gaggcc 56148

```

Figure 5

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Figure 6A

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```

Figure 6B

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Figure 6C

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Figure 6D

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Figure 6E

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Figure 6F

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Figure 6G

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Figure 6H

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Figure 6I

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Figure 6J

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Figure 6K

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gggccctcag	cttgtggctt	gaatatcttt	ttttgttttg	cttttttttt	ttgggggggg
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Figure 6L

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Figure 6M

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Figure 6N

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Figure 60

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Figure 6P

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```

Figure 6Q

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Figure 6R

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Figure 6S

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Figure 6T

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Figure 6U

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Figure 6V

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Figure 6W

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Figure 6X

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Figure 6Y

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Figure 6Z

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Figure 6AA

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Figure 6BB

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Figure 6CC

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Figure 6DD

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Figure 6EE

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Figure 6FF

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Figure 6GG

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Figure 6HH

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Figure 6II

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Figure 6JJ

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Figure 6KK

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Figure 6LL

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Figure 6MM

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Figure 6NN

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Figure 600

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Figure 6PP

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Figure 6QQ

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Figure 6RR

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Figure 6SS

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Figure 6TT

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Figure 6UU.

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Figure 6VV

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Figure 6WW

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Figure 6XX

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Figure 6YY

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Figure 6ZZ

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Figure 6AAA

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```

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Figure 6BBB

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Figure 6CCC

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Figure 6DDD

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Figure 6EEE

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Figure 6FFF

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Figure 6GGG

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Figure 6HHH

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Figure 6III

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Figure 6JJJ

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Figure 6KKK

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Figure 6LLL

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Figure 6MMM

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Figure 6NNN

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Figure 6000

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Figure 6PPP

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Figure 6QQQ

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taaggagggt gcatggggac taagagtac tggagtttag catgggaaat tcaggcaaaa
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gttatttctc tacactggcc ccaggcaggt gcttttgaat gactggctgt ttgcaaaggg

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Figure 6RRR

78/83

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aagtccagat acagatggcc gaatgagggg ccacgagcct gtgcaggaca tacagataat
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cagcttctaa gaaagaggaa aagagagaaa gcaggcaagc ctgagaaatc aggcttgggt
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ccctgtccga cacgggcccc gccccagcac acacaaaggg tggctttcag aagccctgct
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gatataccca ccctgagata ttcgcatgca tataaataaa cataaaataa atatttaag
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```

Figure 6SSS

79/83

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gccaccactc	tgcagacact	ggaaacagcg	caggaccaat	ctgtatccat	cgttcctacc
tgtttctcag	tgggtaacat	tctcaaagca	ttttcagatg	aagaatttag	tcagacagac
agacagatgg	agacacggat	cactggaaga	ctgctgtatg	gggccacatg	gggaaacact
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gtttgctttc	cttggttcta	gttacctgaa	ggcaactatg	acataacaat	attaaatgga
aaattacaga	aataaagtag	ttccttggcc	tcaagttgcc	tgccactgga	agttacagga

Figure 6TTT

80/83

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agccatcttg ttgtcctgct ctgtaagggg cctccctttc tgcaacggat ccaggctgta
taccacaacca tcggctagcg acgtcataga gatctgagta gaacaagtgc tgttggtcaa
gtaccctctga ctttacttaa cagtgacccc caaacgggaa aaagagtagt gttggcaact
tattacagcc aaaaacatgt tattacaatg tttttttatg actgctgtat tgatactggt
aattgctggg tataattaag cttcgttata gatacgtatt tataggaatt agcagcatal
atcagggttg gtggtattta tggtttcagg aatctactac agatccttga aagtatctcc
ctcacaggga gagagactac tgtaccattg ctcttcaatg gtgactccta atactggcat
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gctcttgccc tcgagggatc tgcaagaagg aatggaggga aggatatgtc tctggggacc
agcttctcct ttgaacatgc aggaactaat gagacgcttt ttgaaggagt ccagggtgagt
gacacctatt aaagggtgctt agttaatgct catcccccata aacgcccatt acggcgacag
gttcccacta ctcagccgga acgtttgagc tctagatgct cctctgaaga aatggctgaa
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tccaatccag gctccttttg aacttctagc ttagtttgtc aacactggca gctgaattgg
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c

```

Figure 6UUU

81/83

1 aaagggaatt tcatcccaaa taaaaggaat gaagtctggc tccggaggag ggtccccgac
 exon 1
 61 ctgctgttg gggctcctgt tttctccgc cgcgctctcg cctggccga cgagtggaga
 121 a|atctgcggg ccgggcattg acatccgcaa cgactaccag cagctgaagc gcctggagaa
 exon 2 Primer 1
 181 ctgcacgggtg atcgagggt accccacat cctgctcatc tccaaggctg aggactaccg
 241 cagctaccgc ttcccaagc tcacgggtcat caccgagtac ctgctgtgt tccgtgtggc
 301 tggccttgag agccttggcg acccttccc caatctcacg gtcacccgc gctggaagct
 361 cttctacaac tacgccttg tcatcttga gatgaccaac ctcaaggaca tcgggctcta
 421 caacctgagg aatattacc ggggggcat caggatcgag aagaatgcYg acctctgta
 SNP469
 481 cctctctacg gtggactggt ccctgatcct ggatgccgtg tccaataact acatcgtggg
 541 caacaagccc cctaaggaat gcggggactt gtgccaggg acgctggagg agaagccgt
 601 gtgtgagaag acgaccatca acaacagta caactatcg tgctggacca cgaaccgtg
 Primer 2
 661 ccagaaa|atg tgcccagcgtg tctgcgggaa gcgggcgtgc acagagaacc acgagtgtg
 exon 3 Primer 3
 721 ccaccccgag tgctgggca gctgcagcgc acccgacaac gacacRgcct gtgtggcctg
 SNP766
 781 ccgccactac tactacgccg gactctgctg gccagctgc ccaccaaca cctaccgctt
 841 cgagggttg cgctgcgtg accgcgactt ttgcgccaac atccccagtg cggagagcag
 901 tgactccgag ggctttgtga tccatgatgg Sgagtgcag caggagtgc cttcaggctt
 SNP931 Primer 4
 961 catccgcaat ggcagccaga gc|atgtactg tatcccttgc gaaggccctt gccccaaagt
 exon 4
 1021 ctgtgaggaa gagaagaaga caaagacat tgattctgtc acttctgtc agatgtcca
 1081 aggatgcacc atctcaagg gcaacctgt cattaacatc cgacgcggc|a acaacattg
 exon 5
 1141 ctggagcta gagaactca tggggctcat cgagggtgtg acgggctacg tgaagatccg
 1201 ccactcccat gccttggct cttgtcctt cctgaaaaat cttgccaga tctagggga
 1261 ggagcagctg gagggg|aatt actccttcta cgtccttgac aaccagaact tgcagcagct
 exon 6
 1321 gtgggactgg gaccatcgca acctgacct caaagctggg aaaatgtact ttgcttcaa
 1381 tcccaaatg tgtgtctcc agattaccg catggaggaa gtgacaggga ctaaaggcg
 1441 ccagagcaaa ggggacataa acaccaggaa caatggagag agagcctcc|t gtgaaagtga
 exon 7 Primer 5
 1501 cgtcctKcac ttcacctca ccaccacgtg gaagaaccgc atcatcatca cctggcaccg
 SNP1507
 1561 ataccggccc cctgactaca gggacctcat cagcttact gtctactaca aggaagcg|cc
 Primer 6 exon 8
 1621 ctttaaaac gtcacggagt atgatgggca gcatgcctgt ggctccaaca gctggaacat
 Primer 9
 1681 ggtggacgtg gacctccct ccaataagga cgtcgagcct ggcattctac tgcattggct
 1741 gaagccctg acacagtacg cYgtttacgt cRaggccgtg accctacca tggaggagaa
 Primer 7 SNP1762 SNP1772

Figure 7A

82/83

1801 tgaccacatc cgtggggcca agagtgaat ctgtacatt cgcacaatg ctta|gttc
Primer 8 exon 9

1861 ttccattccc ctggatgtcc tctcagcatc aaactcctct tctcagctga tagtgaagt
1921 gaaccgcgcc tccctgccca atggcaacct gagctactac atcgtgcggt ggcagcgcca
1981 gcctcaggac agctatctct accggcataa ttactgtcc aaa|
Primer 10

ggtgagg gggacatggg acacctgtgg cctgactcc cgagccctat gctacgcatt cagcatcagg ctgctgctgt
Intron 9
gtgcagcctt ggccatggtc acaggtgcta accgYggtgt cYtcccgta cggttgggta acttggctct
SNP9i112 SNP9i119

ccttgggcig ctttttcca agca
|gacaaaa tccccatcag
exon 10

2041 gaagtatgct gatggcacca ttgatgtcga ggaggctaca gagaaccca agactgaagt
2101 gtgtggcggg gagaaggac catgctgtgc ttgccccaa acagaagctg agaagcaggc
2161 agagaaggag gaggctgagt accgcaaggt ctgcagaaac ttctgcaca atgccaatct
Primer 11

2221 tgtgccaga| cctgaacgga agcggaggga ggtcatgcag gtcgcaaYa ccaccatgtc
exon 11 Primer 12 SNP2269

2281 cagccggagc agaaacacca cagtgtgga cacctacaat gtcacggacc cagaggagct
Primer 13

2341 tgagacagag taccctttt ttgagagcag agtgataac aaggagagaa ctgtcatttc
2401 caacctccg ccttttactt ttaccgaat tgacatccac agctgaacc atgaggctga
2461 gaagctgggc tgcagtgcct ccaactttgt ctttgaaga accatgcctg ca|GGTAT
Intron 11

GGTGTGATCCAGTCACTCCATTCCCTAATTCACCTCACAGCCTTGATTGTGAC
AGATGGAGGCTGACACCCAGGGCAATGACCCCTTACTCTCAGTCCTGCTTA
TTAAAGAATGAGTGGTCTTTTGTAGGCAGCTCACTAGTCCAGCAGCCCAG
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GAGTGCTTGAGAGCAGGGAATCAATTCAGGGTCTACACTTTCCTCTCCT
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CTCTTCTTTTAGAAGCTACCTGTGGCCAGACAGCAAGCCATC(N)_nAAAAA
AAAAAAAGAAACCTACTGT
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TGTATGCATGGTTGAAGAGGGTATTCTTAGGTTTAA
TCCAGCATTTTTTGTCTTTTTTGGGGGACTTGAGTCTAACTTCATTGCTTGT
TTCAATTGTTGCACA|gaaggagc
exon 12

2521 agatgacatt cctgggccag tgacctggga gccacggcct gagaactcca tcttttaaa
2581 gtggccagaa cctgagaatc ctaatggatt gattctaag tatgaaataa aatacggatc
2641 acaagtcgag| gatcagcggg aatgtgtgc cagacaggag tacaggaagt atggaggggc
exon 13

2701 caagctgaac aggetcaacc cggggaacta cacggcccgg attcaggcca cctctctctc

Figure 7R

83/83

2761 cgggaatggg tcatggacgg aacctgtgtt ctctacgtc caggccaaa|a cgacatatga
 exon 14
 2821 aaacttcac catctgalca tcgccctacc agtggccgtt ctgttgatag taggagggtt
 2881 ggtataatg ttgtacgtct tccacagaaa gaga|aataac agcaggctgg ggaatggagt
 exon 15
 2941 gctgtatgct tccgtgaacc cggagtactt cagcgcagct gat|gtgtacg tccccgacga
 exon 16
 3001 gtgggagggtc gcccgggaga agatcacat gagccgggag ctgggacagg gctccttcgg
 Primer 14
 3061 gatggtttat gaaggcgtcg ccaaSggYgt ggtcaaagat gagcctgaga ccagggtggc
 SNP3085 SNP3088
 3121 cattaagaca gtgaatgagg ccgccagcat gcgYgagagg attgagttc tcaacgaggc
 SNP3154 Primer 15
 3181 ctccgtgatg aaggagtcca actgtcacca cgtg|GTGAGGGAAGGGCCCCAAG
 Primer 16 Intron 16
 GGTGGRCCACCCTTATGGGTTTGCGACTCATCCTGTCTCTGTAGGATCC
 CTSTCACTGCTCAAGAAGGTTGGGGGGGATGTGCA
 SNP16i27 SNP16i73
 GGTCCAGGGAGTCTGGTGCCACATCATCCAGGGTTGCTCAGGGTGGTCCT
 GGTGGGGTTGGGGGGCTGCGGGGGCTCACCCCCTGTCTCCTTCTCTTTCCC
 CCTCACAG|gtgcgg ctgctgggtg tgggtccca
 exon 17
 3241 gggccagcca acgctggta tcatggaact gatgaccgg gggaccta aaagtatct
 Primer 17
 3301 ccggtctctg agaccagaaa tggag|aataa tccagtccta gcacctcaa gcctaagcaa
 exon 18
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 Primer 18 SNP3385 Primer 20 Primer 19
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 exon 20
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 SNP3757 exon 21
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 Primer 22 SNP3832
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 Primer 23
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